

In the Claims:

Please amend Claims 1 and 5, and add new Claims 8-17 as indicated below.

The status of all pending claims is as follows:

1. (Currently Amended) A process for managing a plurality of data items contained in a plurality of pages which are sequentially arranged in accordance with predetermined relationships, comprising the steps of:

(a) ~~storing~~ storing, in an available-space-information storing unit, information on an amount of available space in each of said plurality of pages;

(b) acquiring an amount of available space in each of first and second pages based on said information stored in step (a), when a first data item is inserted into or deleted from a third page, said plurality of pages include the first, second, and third pages, the first page precedes the third page in sequential arrangement of the plurality of pages, and the second page follows the third page in the sequential arrangement; and

(c) moving at least one second data item contained in said third page to said first page or said second page according to said amount of available space in each of said first and second pages, before insertion of said first data item into said third page or after deletion of said first data item from said third page; and

wherein, in said step (c), when said first page has sufficient available space and said second page has insufficient available space, said at least one second data item is moved to said first page.

2. (Original) A process according to claim 1, wherein, in said step (a), when said amount of said available space is equal to or less than a predetermined amount, said information indicates that substantially no available space exists.

3. (Cancelled)

4. (Original) A process according to claim 1, wherein, in said step (a), said amount of the available space is classified into one of a plurality of ranges of amounts of the available space, and said information on the amount of the available space indicates one of the plurality of ranges.

5. (Currently Amended) A process according to claim 4, wherein one of said plurality of ranges ~~including~~ indicating the biggest ~~smallest amount of the available~~ of available space is a wider range than any of the other of said plurality of ranges.

6. (Previously Presented) A computer-readable storage medium storing a program which makes a computer execute a process for managing a plurality of data items contained in a plurality of pages which are sequentially arranged in accordance with predetermined relationships, said program further makes said computer realize:

an available-space-information storing unit which stores information on an amount of available space in each of said plurality of pages;

an adjacent-space-information acquiring unit which acquires an amount of available space in each of first and second pages based on said information stored based on said information stored in said available-space-information storing unit, when a first data item is inserted into or deleted from a third page, said plurality of pages include the first, second, and third pages, the first page precedes the third page in sequential arrangement of the plurality of pages, and the second page follows the third page in the sequential arrangement; and

a moving unit which moves at least one second data item contained in said third page to said first page or said second page according to said amount of available space in each of said first and second pages, before insertion of said first data item into said third page or after deletion of said first data item from said third page,

wherein when said first page has sufficient available space and said second page has insufficient available space, said at least one second data item is moved to said first page.

7. (Previously Presented) A data management apparatus for managing a plurality of data items contained in a plurality of pages which are sequentially arranged in accordance with predetermined relationships, comprising:

an available-space-information storing unit which stores information on an amount of available space in each of said plurality of pages;

an adjacent-space-information acquiring unit which acquires an amount of available space in each of first and second pages based on said information stored based on said information stored in said available-space-information storing unit, when a first data item is inserted into or deleted from a third page, said plurality of pages include the first, second, and third pages, the first page precedes the third page in sequential arrangement of the plurality of pages, and the second page follows the third page in the sequential arrangement;

a moving unit which moves at least one second data item contained in said third page to said first page or said second page according to said amount of available space in each of said first and second pages, before insertion of said first data item into said third page or after deletion of said first data item from said third page;

when said first page has sufficient available space and said second page has insufficient available space, said at least one second data item is moved to said first page.

8. (New) A process for managing a plurality of data items contained in a plurality of pages which are sequentially arranged in accordance with predetermined relationships, comprising the steps of:

(a) storing information on an amount of available space in each of said plurality of pages;

(b) acquiring an amount of available space in each of first and second pages based on said information stored in step (a), when a first data item is inserted into or deleted from a third page, said plurality of pages include the first, second, and third pages, the first page precedes the third page in sequential arrangement of the plurality of pages, and the second page follows the third page in the sequential arrangement; and

(c) moving at least one second data item contained in said third page to said first page or said second page according to said amount of available space in each of said first and second pages, before insertion of said first data item into said third page or after deletion of said first data item from said third page; and

wherein, in said step (c), when both of said first and second pages have sufficient available space, said at least one second data item is moved to said second page.

9. (New) A process for managing a plurality of data items contained in a plurality of pages which are sequentially arranged in accordance with predetermined relationships, comprising the steps of:

(a) storing information on an amount of available space in each of said plurality of pages;

(b) acquiring an amount of available space in each of first and second pages based on said information stored in step (a), when a first data item is inserted into or deleted from a third page, said plurality of pages include the first, second, and third pages, the first page precedes the third page in sequential arrangement of the plurality of pages, and the second page follows the third page in the sequential arrangement; and

(c) moving at least one second data item contained in said third page to said first page or said second page according to said amount of available space in each of said first and second pages, before insertion of said first data item into said third page or after deletion of said first data item from said third page,

wherein, in said step (a), said amount of the available space is classified into one of a plurality of ranges of amounts of the available space, and said information on the amount of the available space indicates one of the plurality of ranges.

10. (New) A process according to claim 6, wherein, in said step (a), said amount of the available space is classified into one of a plurality of ranges of amounts of the available space, and said information on the amount of the available space indicates one of the plurality of ranges.

11. (New) A process according to claim 7, wherein, in said step (a), said amount of the available space is classified into one of a plurality of ranges of amounts of the available space, and said information on the amount of the available space indicates one of the plurality of ranges.

12. (New) A process according to claim 8, wherein, in said step (a), said amount of the available space is classified into one of a plurality of ranges of amounts of the available space, and said information on the amount of the available space indicates one of the plurality of ranges.

13. (New) A process according to claim 9, wherein, in said step (a), said amount of the available space is classified into one of a plurality of ranges of amounts of the available space, and said information on the amount of the available space indicates one of the plurality of ranges.

14. (New) A process according to claim 10, wherein one of said plurality of ranges indicating the smallest amount of available space is a wider range than any of the other of said plurality of ranges.

15. (New) A process according to claim 11, wherein one of said plurality of ranges indicating the smallest amount of available space is a wider range than any of the other of said plurality of ranges.

16. (New) A process according to claim 12, wherein one of said plurality of ranges indicating the smallest amount of available space is a wider range than any of the other of said plurality of ranges.

17. (New) A process according to claim 13, wherein one of said plurality of ranges indicating the smallest amount of available space is a wider range than any of the other of said plurality of ranges.